

Appl. No. 10/748,830
Amdt. Dated: Nov. 4, 2005
Reply to Office Action of Aug. 24, 2005

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A color projection display device, comprising:

a light source adapted for providing white light beams;

a micro-mirror unit, the micro-mirror unit being configured so as to receive the white light beams incident thereupon, the white light beams having been emitted directly from the light source without being reflected;

and

a projection lens;

wherein the micro-mirror unit is configured for selectably performs switching between an on state and an off state according to a driving

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signal, the micro-mirror unit reflecting light beams emitted from the light source to the projection lens in the on state, ~~[[and]]~~ the micro-mirror unit not reflecting said light beams to the projection lens in the off state, the projection lens enlarging and displaying the light beams reflected by the micro-mirror on a screen, the projection lens thereby being configured for generating images ~~thereon~~ on the screen.

Claim 2 (original): The color projection display device as described in claim 1, wherein the micro-mirror unit is made by a micro-electromechanical system.

Claim 3 (original): The color projection display device as described in claim 1, wherein the driving signal is generated by a pulse width modulation driving device.

Claim 4 (currently amended): The color projection display device as described in claim 1, wherein the micro-mirror unit comprises a complementary metal-oxide semiconductor layer, a metal layer, a torsion layer and a ~~micro-lens~~ micro-mirror array formed on a silicon substrate.

Claim 5 (currently amended): The color projection display device as described in claim 4, wherein the micro-mirror unit further comprises an

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address electrode formed on the torsion layer for providing the driving signal to the ~~micro-lens~~ micro-mirror array.

Claim 6 (currently amended): The color projection display device as described in claim 4, wherein the micro-mirror unit further comprises an address electrode formed on the torsion layer for providing the driving signal to the ~~micro-lens~~ micro-mirror array.

Claim 7 (currently amended): The color projection display device as described in claim 6, wherein the driving signal comprises two digital ~~stats~~; stats: one digital state maintaining one micro-mirror of the micro-lens array in the on state, and the other digital state maintaining the micro-mirror in the off state.

Claim 8 (currently amended): A color projection display device, comprising: a light source adapted for providing light beams, a light modulation unit for modulating colors of the light beams emitted from the light source, and a projection lens for projecting the light beams reflected by the light modulation unit onto a ~~screen~~; screen, the light modulation unit comprising:

a micro-mirror array ~~including~~ comprising a red micro-mirror, a green

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micro-mirror, and a blue micro-mirror, each micro-mirror functioning as a color filter and ~~capable of~~ being configured for receiving and reflecting the light beams directly emitted from the light source to the projection lens; and

a ~~driver~~ driving circuit for providing a digital signal to the micro-mirror array to maintain each micro-mirror thereof one of in an on state ~~[[or]]~~ and in an off state.

Claim 9 (original): The color projection display device as described in claim 8, wherein the micro-mirror array is made by a micro-electromechanical system.

Claim 10 (currently amended): The color projection display device as described in claim 1, wherein a pulse width modulator (PWM) is configured for controlling the driver driving circuit ~~is controlled using a pulse-width modulator (PWM).~~

Claim 11 (currently amended): A color projection display device, comprising: a light source adapted for providing light beams, a light modulation unit for modulating colors of the light beams emitted from the light source, and a projection lens for projecting the light beams reflected

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by the light modulation unit onto a ~~screen~~; screen, the light modulation unit comprising:

a micro-mirror array ~~including~~ comprising at least three micro-mirrors, each characterized with one single original color, and functioning as a color filter and being ~~capable of~~ configured for receiving and reflecting the light beams directly emitted from the light source to the projection lens; and

a driver circuit for providing a digital signal to the micro-mirror array to maintain each micro-mirror thereof in an on state or in an off state; wherein through an on-off state change of each of said micro-mirror, a combination of the light beams defines at least 2^3 alternatives.

Claim 12 (new): The color projection display device as described in claim 11, wherein the micro-mirror array is made by a micro-electromechanical system.

Claim 13 (new): The color projection display device as described in claim 11, wherein a pulse width modulator (PWM) is employed for controlling the driver circuit.

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Claim 14 (new): The color projection display device as described in claim 8, wherein a pulse width modulator (PWM) is employed for controlling the driver circuit.